

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A motor for a fuel pump, comprising:
a permanent magnet formed from a plurality of magnetically differing poles disposed in an alternating and circumferential fashion;
an armature rotatably disposed within an inner circumference of the permanent magnet, the armature having coils wound thereabout; and
a commutator comprising a plurality of segments disposed in a direction of rotation and electrically connected to the coils wound around the armature, the segments mutually adjacent in the direction of rotation and being mutually insulated;
a brush successively contacting each of the segments due to rotation of the armature; and
a capacitor electrically connected to a circuit including the commutator and the armature, wherein the capacitor stores electromagnetic energy released by the coils during rotation of the armature to prevent occurrence of discharge between the brush and the segments, wherein the commutator and the armature comprise a rotating member, ~~and~~ wherein the capacitor is disposed inside the rotating member so as not to be disposed on a peripheral surface of the rotating member, and wherein a recessed portion is formed between adjacent coils in the armature and between the coils and the commutator in an axial direction of the armature, and the capacitor is disposed so as to project on a side of the commutator nearest the armature and is disposed in a position corresponding to the recessed portion, whereby an axial length of the motor can be shortened.

2. (Previously presented) The motor according to claim 1, further comprising:
a center core; and

and outer core, wherein the center core and the outer core are joined by a joint such that when successive outer cores are joined to the center core, the coil, when wound, forms a trapezoidal shape.

3. (Original) The motor according to claim 1, wherein electric current from the coils flows to the brush via the segments when the segments and the brush are in contact, and the electromagnetic energy discharged by the coils is temporarily built up by the capacitor when the brush separates from the segments.

4. (Original) The motor according to claim 1, wherein the capacitor is disposed in the commutator.

5. (Original) The motor according to claim 4, wherein the commutator comprises a plurality of terminals electrically connected to the respective segments, the capacitor being electrically connected directly to at least two of the terminals adjacent in the direction of rotation.

6. (Original) The motor according to claim 1, wherein the number of the segments is even and pairs of the terminals located radially opposite are directly electrically connected.

Claim 7. (Canceled).

8. (Currently amended) The motor according to claim 1, wherein the armature comprises:

a plurality of armature pieces disposed in the direction of rotation,
a plurality of coils wound around the respective armature pieces, and
a plurality of coil terminals corresponding to the respective coils,

the capacitor being disposed ~~on a side of the commutator nearest the armature~~
so as to be located between the coil terminals.

Claim 9. (Canceled).

10. (Currently amended) The motor according to ~~claim 7~~ claim 1, wherein the segments and the capacitor are joined by insert molding an insulating resin portion.

11. (Original) The motor according to claim 1, wherein the armature comprises a plurality of bobbins disposed in the direction of rotation, coils being formed by winding of coil around each of the bobbins.

12. (Original) The motor according to claim 1, wherein the coils wound around the armature are joined together with a star connection.

13. (Original) The motor according to claim 1, whereby the following expression is satisfied, where O is a rated output of the motor [W], P is the number of pole pairs of the permanent magnet, and C is the total electrostatic capacity of the capacitors [μ F]:

$$0.02 * O * P < C < 0.2 * O * P.$$

14. (Original) A fuel pump employing a motor according to claim 1, the fuel pump further comprising:

a pump portion that generates a drawing force to draw fuel from a fuel tank due to a rotational driving force of the armature.

15. (Currently amended) A commutator for a fuel pump rotating together with an armature and converting electric current supplied to coils wound around the armature, the commutator comprising:

a plurality of segments electrically connected to the coils and contacting brushes accompanying rotation of the armature, the segments being disposed in a direction of rotation, pairs of the segments adjacent in the direction of rotation being mutually and electrically insulated; and

a capacitor electrically connected to the segments, temporarily building up electromagnetic energy discharged by the coils accompanying rotation of the armature, wherein the capacitor is disposed adjacent a surface of at least one said segment on a side opposite to a contacting surface thereof which contacts with the brushes, and wherein a recessed portion is formed between adjacent coils in the armature and between the coils and the commutator in an axial direction of the armature, and the capacitor is disposed so as to project on a side of the commutator nearest the armature and is disposed in a position corresponding to the recessed portion, whereby an axial length of the motor can be shortened.

16. (Original) The commutator according to claim 15, further comprising:
a plurality of commutator terminals electrically connected to the respective segments, the capacitor being electrically connected directly to at least two of the commutator terminals adjacent in the direction of rotation,
the capacitor further comprising:
a main capacitor body; and
a flexible terminal extending from the main capacitor body.

17. (Original) The commutator according to claim 16, further comprising:
a plurality of commutator terminals electrically connected to the respective segments, the capacitor being electrically connected directly to at least two of the commutator terminals adjacent in the direction of rotation, the commutator terminals having first terminals electrically connected directly to the respective segments and second terminals electrically connected directly to the capacitors.

Claims 18-26. (Canceled).

27. (Previously presented) The motor according to claim 1, wherein the commutator and the capacitor are formed into a single, integrated body with molded resin.

Claim 28. (Canceled).

29. (Previously presented) The motor according to claim 1, wherein the capacitor is disposed adjacent a surface of the commutator on a side opposite to a contacting surface of the commutator which contacts with the brushes.